Public Works (1914) Department.

G.O. No. 1159

DATED 4 · 3 · 1914.

The Notes
in this G.O. have been printed.

[Despatch Abstract.]

Improvements to the Surplus weir of Marudur tank, Periyar System —
Sanctioning with remarks an estimate amounting to Rs. 2819 for —

[P. W. 9. 2,000—2-10-12.]

~~Indexed.~~ 7/3

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BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

IRRIGATION.
ACCOUNT.

Recd.	1914.	*Enclosures*	
Regd.		*Spare copies*	

G.O. No. 115 I., 4th March 1914.

Improvements to the surplus weir of Marudur tank.
Periyar system

Sanctioning, with remarks, an estimate amounting to Rs. 2,819 for —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers :—

I

Letter—from S. B. MURRAY, Esq., Superintending Engineer, VI Circle.
To—the Chief Engineer for Irrigation.
Dated—Trichinopoly, the 1st August 1913.
No.-1134-C.E.

I have the honour to forward herewith for your approval and sanction of Government an estimate amounting to Rs. 2,680 for improvements to the surplus weir of Marudur tank, Melur taluk, Madura district.

2. The details of, and the necessity for, the proposed improvements to the weir are explained in the report attached to the estimate.

3. The rates entered in the estimate are fair, and the estimate is recommended for sanction,

The work will be completed before the 31st March 1915.

II

Memorandum No. 3240/13-1, dated 25th September 1913.

The plans and estimate amounting to Rs. 2,680 for improvements to the surplus weir of the Marudur tank, Melur taluk, Madura district, forwarded by the Superintending Engineer, VI Circle, with his letter No. 1134 C.E., dated 1st August 1913, are herewith returned to the Superintending Engineer with the request that he will report if it will not meet the requirements of the case to found the body wall at site of breach two feet below bottom of scour level, fill up the scour hole with laterite boulders and build a concrete apron at the same level as the rest of the proposed apron on the boulders.

(By Order.)

F. E. MORGAN,
Asst. Chief Engineer for Irrigation.

To the Superintending Engineer, VI Circle, with plans and estimate.

III

Reminder to the Supg. Engineer,	VI Circle,	dated	31st Oct. 1913.		
From the ,,	VI ,,	,,	8th Nov.	,,	No. 1618/858-C.E.
Reminder to the ,,	VI ,,	,,	2nd Jan. 1914.		
From the ,,	VI ,,	,,	10th ,,	,,	No. 39-C.E.

IV

Letter—from S. B. MURRAY, Esq., Superintending Engineer, VI Circle.
To—the Chief Engineer for Irrigation.
Dated—Trichinopoly, the 12th February 1914.
No.—226-C.E.

With reference to your Memorandum No. 3240/13-1, dated 25th September 1913, I have the honour to forward herewith an estimate amounting to Rs. 2,320 for improvements to the surplus weir of Marudur tank, Melur taluk, Madura district, revised on the suggestions contained in your memorandum quoted above. I am not at all confident that the concrete slab over 13 feet of dry stone packing will not crack as a result of settlement.

2. The estimate may be returned sanctioned at an early date so that the work can be completed during the closure of the Periyar canals.

ENCLOSURE.

Report to accompany the estimate for improvements to the surplus weir of Marudur tank.

	RS.
Amount of estimate	2,320

The Marudur tank is one of the largest Periyar tanks. The X Branch channel tails into it and from it the Chunnamboor offtake really a continuation of the former, again takes off. To discharge its surplus it has a weir 327′ long. Originally it would seem that there was only a short byewash 129′ 6″ long with a bodywall of dry roughstone. The present weir was built under an estimate of Rs. 1,599 sanctioned in G.O. No. 604 I., dated 2nd June 1906, and C. R. No. 81 of 1906–07. At the right end where there was the old byewash the weir was simply raised to the required height by building in coursed rubble on the old rough stone wall. No aprons were provided in front or rear reliance evidently being placed on the laterite which covered the whole site of the surplus. It may have been thought that this laterite was a solid mass of considerable thickness. The new extension to the left of the old byewash was built of coursed rubble with concrete foundations, the concrete being laid almost on the surface of the laterite. The new wall was only 1 to 2′ in height.

In the course of time the laterite in rear of the new wall became worn and holes formed, the concrete foundations being exposed in parts. Last year when the tank filled about October water suddenly began to leak in considerable quantities through the old bodywall under the new wall on the right and before proper steps could be taken to stop it about 34′ of the weir breached and a very deep scour formed in rear. The breach and scour is shown on accompanying plan. The breach was caused by water forcing its way underneath and through the bottom of the wall and undermining and blowing it up. A ring-bund was formed in front and for the rest of the season water was prevented from flowing over this portion of the weir.

When the breach was examined it was found that the laterite was really only a skin about 2′ thick and underneath there was only the greasy white clay commonly found in the Periyar area. The laterite is very friable and unable to stand the action of water falling on it from any considerable height.

It is urgently necessary to render the weir safe and to effect this, this estimate has been prepared and provides for filling in all the holes in rear of the main portion of the weir wall with concrete and roughstone and forming aprons of roughstone grouted, with concrete underneath as shown in the accompanying plan. The widths of the aprons are designed to suit the actual conditions. The estimate also provides for making good the breached portion. A new bodywall will be built across the scour in line with the rest of the weir and connected with it. This wall will be taken right down to the bottom of the scour and the scour-hole will be filled with laterite boulders to level 437·50. Over these boulders will be laid on apron of surki concrete 1½′ thick. The top of this apron will be at 439·00, *i.e.*, at the same level as the top of the proposed apron in rear of the right end of the weir. As the apron to the left of the scour will be at level 441·40, 2·40′ higher than the apron on the scoured portion, a cut-off wall is proposed between the two aprons as shown in the plan. Till the work is carried out the ring bund will be kept in position to prevent surplus passing over this portion of the weir. The work can only be done in the dry months when there is no water in the tank. The only alternative to this proposal would be to shift the weir and build it anew but at all other parts of the surplus site the conditions are if anything worse than at the present site.

Early sanction is requested.

M. O'BRIEN,
Executive Engineer, Madura Division.

18th November 1913.

V.

Note by the Chief Engineer for Irrigation, No. 3240/13-2, dated 2nd March 1914.

With his letter No. 1134-C.E., dated 1st August 1913, the Superintending Engineer, VI Circle, submitted an estimate amounting to Rs. 2,680 for improvements to the surplus weir of Marudur tank, Periyar system. The estimate was returned to the Superintending Engineer with this office memorandum No. 3240/13-1, dated 25th September 1913, with certain remarks for revision. The Superintending Engineer, with his letter No. 226-C.E., dated 12th February 1914, now resubmits the estimate duly revised to Rs. 2,320.

2. Marudur tank has at present a surplus weir 327 feet long at its left flank It is stated that when the tank filled in October 1912 water suddenly began to leak in considerable quantities through the bodywall and that before proper steps could

be taken to stop the leaks the weir breached for about 34 feet near the right end and the ground has been deeply scoured at the site. The estimate provides for rebuilding the breached portion of the weir, filling the scour holes with laterite boulders up to level + 437·50 and putting on a concrete apron 1′ 6″ thick over it, and for carrying out the necessary repairs and improvements with suitable aprons for the remaining portion of the weir.

3. An apron of grouted roughstone boulders of large size has now been substituted in this office for the concrete apron allowed over the laterite packing at the scour. This does not however affect the total of the estimate. The estimate as altered in this office is recommended for sanction with the following remarks.

4. The cartage allowed in the detailed data for coursed rubble and broken stone are slightly excessive when compared with the latest schedule of rates of the division and this should be looked into before the execution of the work and the rate reduced if necessary.

W. M. ELLIS, Col., R.E.,
Chief Engineer for Irrigation.

To the Secretary to Government, Public Works Department (Irrigation).

Order—No. 115 I., dated 4th March 1914.

The following estimate is sanctioned:—

Imperial.
Capital Expenditure not charged to Revenue.
49. Irrigation.
Periyar System.
Madura Division.
Open Capital Account.
I. Works.
3. Distributaries.
C. Works.
Unremunerative Work.
Improvements to the surplus weir of Marudur tank.

	RS.
Estimate—	
I. Works	2,320
II. Establishment	499
Total ...	2,819

2. The sanction accorded in paragraph 1 above is registered as No. 151 I. of 1913-14 and will expire on the 31st March 1915.

3. The attention of the Superintending Engineer, VI Circle, is drawn to paragraphs 3 and 4 of the note by the Chief Engineer for Irrigation.

(True Extract.)

W. M. ELLIS, Col., R.E.,
Ag. Secretary to Government, P.W.D.
(Irrigation Branch).

To the Chief Engineer for Irrigation.
,, Superintending Engineer, VI Circle,
with plans and estimate.
,, Accountant-General, Madras.

Forwarded to the

(By order).

Deputy Registrar.

PUBLIC WORKS DEPARTMENT
(IRRIGTION BRNCH).

NOTES CONNECTED WITH G.O. No. 115 I., DATED 4TH MARCH 1914.

[SUBJECT.—*Estimate amounting to Rs.* 2,819 *for improvements to the surplus weir of Marudur tank, Periyar system.*]

Note by the Chief Engineer for Irrigation, dated 2*nd March* 1914, *No.* 3240/13-2.

Under Secretary—

A draft order sanctioning the estimate is submitted for approval and issue. It need not be placed on Editors' Table.

M.S.—27-2-14.

M.S.V.—2-3-14.

F. E. MORGAN—2-3-14.

[Issued as G.O. No. 115 I., dated 4th March 1914.]

SUPERINTENDING ENGINEER'S OFFICE, TRICHY
C.E. 2268
13 NOV 1913

PUBLIC WORKS DEPARTMENT.

Irrigation Branch. No. 1618 CE / 858 8.11.13

REMINDER. 3240/13-1

To

the Supg Engineer
Sixth Circle

THE undersigned has the honour to invite attention to the ~~Order~~ R.O.C.* No. 3240/13-1 dated 25 Septr 1913. and to request that this reminder may be returned at once with information in the margin as to—

(1) the stage at which the matter now is,

(2) the date by which a reply may be expected, ~~and~~

~~(3) the circumstances which have caused the delay.~~

MADRAS, 30/31 Octr 1913

[signature] 31/10/13
for *Chief Engineer for Irrigation.*

30-10-13

* *Subject.*

31/10/13

Improvements to the surplus weir of the Marudur tank — Calling for certain information connected with the —

Ror 3240/13 file transferred to HC on 30-10-13

REPLY.

To

THE CHIEF ENGINEER FOR IRRIGATION, Madras.

C 3240/13

CHIEF ENGINEER FOR IRRIGATION.
10 NOV 1913
No. 6117/13

The Executive Engineer's report is awaited. No 2 will be answered after hearing from the Executive Engineer.

S.M. Munro
7.11.13
Supdg Eng, VI Circle

5/11/13

Glo No 9850
21.11.13

4

SUPERINTENDING ENGINEER'S OFFICE
9
5 JAN 1914
Second
VI CIRCLE, TRICHINOPOLY.

PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

REMINDER. 3240/13.

To

The Supg Engineer
VI Circle.

THE undersigned has the honour to invite attention to the ~~Order~~ R.O.C.* No. 1618 a / 858 dated 8.11.13. and to request that this reminder may be returned at once with information in the margin as to—

(1) the stage at which the matter now is, and

(2) the date by which a reply may be expected, ~~and~~

~~(3) the circumstances which have caused the delay.~~

Recd

[signature]
2.1.14

MADRAS,

2 - 1. 1914.

for *Chief Engineer for Irrigation.*

21/1/14

* *Subject.*

Improvements to the Surplus Weir of ~~the~~ Mamdu Tank -

Stating that the EE's report is awaited and that a date will be fixed on hearing from the EE

The

C 3240/13 No 39.CE Dt 10.1.14

CHIEF ENGINEER FOR IRRIGATION
C 12 JAN 1914
No. 201/14

REPLY.

To

THE CHIEF ENGINEER FOR IRRIGATION,

Madras.

Sir,

I have the honour to inform you that the Estimate is being forwarded to you with a separate number.

I have etc

[signature]
1/1/14
Supg Engineer
VI Circle

A.S.E. VI O
9.1.14

9.1.14

8/

From the S.E. VI circle No. 1134 CE d 1.8.13
To Orn do — No. 3240/13-1 d 25.9.13
Rr. d do — d 31.10.13
from the do — No. 1618 CE / 858 d 8.11.13
Rr. to Quite do — d 2.1.14
from do — No. 39 C.E d 10.1.14
From Orn do — No. 226 C.E d 12.2.14
with report

1.8D

141-2 ef

p 3 ef

p 5 ef

Note by the Chief Engr for Irrigation

No. 3240/13-2 d 2.3.14

With his letter No. 1134 CE dated 1-8-13 the SE 6th circle submitted an Estimate amounting to Rs 2680 for improvement to the surplus weir of Marudur tank Periyar system. ~~[illegible]~~ The Estimate was returned to the SE with this Office Memo No. 3240/13-1 dated 25-9-13 with certain remarks for revision. The SE with his letter No. 226 CE dated 12-2-14 now resubmits the Estimate duly revised to Rs 2,320.

2 Marudur tank has at present a surplus weir 327 ft long at its left flank. It is stated that when the tank filled in October ~~last~~ 1912 water suddenly began to leak in considerable quantities through the bodywall & that before proper steps could be taken to stop the leaks the weir breached for about 34 ft ~~beyond 97 ft from the bu~~ near the right end and the ground has been deeply scoured at the site ~~and a deep scour formed at the site~~. The Estimate provides for rebuilding

2

the breached portion of the weir, filling the scour hole with laterite boulders up to level + 437.50 ~~with~~ and putting on a concrete apron 1'-6" thick over it, and for carrying out the necessary repairs and improvements ~~for~~ with suitable aprons for the remaining portion of the weir.

3. An apron of grouted roughstone boulders of large size has now been substituted in this office for the concrete apron allowed over the laterite packing at the scour. This does not however affect the total of the estimate. The estimate as altered in this office is recommended for sanction with the following remarks.

4. The cartage allowed in the detailed data for coursed rubble & broken stone are slightly excessive when compared with the latest schedule of rates of the division & this should be ~~carefully~~ looked into before being calculated and paid for during execution of the work & the rate reduced if necessary.

[signatures] 2/3/14 S.E. 2/3/14 E.E.

Exd 24/2/14. 24/2/14

Scott. II—10 (a)—7,000—4-13.

P. W. DEPARTMENT.
Irrign.

Impt. to the surplus weir of Marudur tank, Periyar System, Sanctioning with remarks an esti amounting Rs 2819 for ——

Cross Refs
Tanks, Madura.

READ AGAIN G.O. No. ......, dated ...... 191 .

" " " " ......, " ...... 191 .

READ ALSO :—

C. No. ......, From the Chief Engr. for Irrign., No. 3240/3-2 dated 2 . 3 . 1914.

" " pp 8-9 Cp " " Print ......, " ......, " ...... 191 .

" " ......, " " ......, " ......, " ...... 191 .

ORDER.

No. 1159, dated 4 . 3 . 1914.

Press

Print notes.

U & The following estimate is sanctioned :—

Imperial

Capital Expenditure not charged to Revenue

49. Irrigation.

Periyar System

Madura Dt.

Open Capital Account

I. Works.

3. Distributaries

C. Works

Unremunerative work

Impts. to the surplus weir of Marudur tank

Note
Only the "Note by E.E." should be sent along with the G.O. in Impt.

13196

2320
21½

2320
4640
1160

498|80

Estimate.

I Works. Rs 2320

II Estabt. 499

Total 2,819

2. The sanction accorded in para 1 above is registered as No 151. D. of 1913–14 and will expire on the 31st March '15.

3. The attention of the S.E. VI circle is drawn to paras 3 and 4 of the note by the Chief Engr. for Irrign.

Issue
23/4

Issue

[illegible] 2/3/14

[illegible] 7/3/14

D.S.

D

To
The Chief Engr. for Irrign. (in red)
" S.E. VI circle (with plans & etc) (in red)
" A.G. Madras.

D 6/3/14
NCD 15/4/14

[illegible] 2/14
27/14

3